

1. A skin attachment member of plastic resin,  
2 comprising:  
3 a sheet-form backing, and  
4 an array of skin penetrating elements extending  
5 integrally from the backing, the skin penetrating elements  
6 being configured to penetrate into the epidermal skin layer  
7 and sized to limit painful contact with nerves below the  
8 epidermal skin layer,

9 at least many of the skin penetrating elements each  
10 including at least one retention barb extending from an  
11 outer surface of the skin penetrating element, the barbs  
12 configured to cooperate to resist removal of the skin  
13 attachment member from skin.

1. 2. The skin attachment member of claim 1 wherein  
2 each skin penetrating element comprises a cone-shaped body.

1. 3. The skin attachment member of claim 2 wherein a  
2 base of the cone-shaped body has a diameter of about 0.003".

1. 4. The skin attachment member of claim 1 wherein  
2 each skin penetrating element includes a pointed tip.

1. 5. The skin attachment member of claim 1 wherein  
2 each skin penetrating element has a length of about 0.012".

1. 6. The skin attachment member of claim 1 wherein  
2 the backing has a thickness in a range of about 0.003" to  
3 0.008".

1. 7. The skin attachment member of claim 1 wherein  
2 the at least one retention barb of each skin penetrating

3 element is located about 0.008" to 0.0095" along a length of  
4 the skin penetrating element from the backing.

1 8. The skin attachment member of claim 1 wherein  
2 the at least one retention barb of each skin penetrating  
3 element has a length of about 0.0001".

1 9. The skin attachment member of claim 1 wherein  
2 the at least one retention barb of each skin penetrating  
3 element tapers from a thickness of about 0.0001" to a point  
4 at an angle of about 72°.

1 10. The skin attachment member of claim 1 wherein  
2 of each skin penetrating element includes two barbs.

1 11. The skin attachment member of claim 1 having a  
2 density of about 400 skin penetrating elements in a 0.1 in<sup>2</sup>  
3 area.

1 12. The skin attachment member of claim 1 wherein  
2 the skin penetrating elements are spaced apart from each  
3 other a distance of about 0.003".

1 13. The skin attachment member of claim 1 formed  
2 from nylon.

1 14. The skin attachment member of claim 1 formed  
2 from polyethylene terephthalate.

1 15. The skin attachment member of claim 1 formed  
2 from polyester.

*AS*  
16. The skin attachment member of claim 1 formed by  
2 molding.

*AS*  
17. The skin attachment member of claim 1 wherein  
2 at least many of the skin penetrating elements define at  
3 least one groove in an outer surface of the skin penetrating  
4 elements.

*AS*  
18. The skin attachment member of claim 1 wherein  
2 the skin penetrating elements are oriented perpendicular to  
3 the backing.